RICE UNIVERSITY
Department of Chemistry
CHEM 122: General Chemistry II
Spring 2015

INSTRUCTORS

Dr. Kristi Kincaid (MWF-10am and Lab) Office: DBH 242
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Dr. Lesa Tran Lu (MWF-8am and MWF-1pm) Office: DBH 142
Email: lesa@rice.edu Office Hours: Tuesdays 1:00 PM-3:00 PM

REQUIRED MATERIALS

Texts: *Chemistry*, 6th ed., by McMurry & Fay
Concept Development Studies in Chemistry 2013, by J. S. Hutchinson
Homework: MasteringChemistry Online System (Course ID: RICECHEM122S2015)

COURSE OUTLINE

Unit I -

- Gas properties and the Ideal Gas Law
- Kinetic Molecular Theory
- Chemical Kinetics

Unit II -

- Chemical Reaction Equilibrium
- Intermolecular Interactions
- Phase Transitions and Diagrams
- Phase Equilibrium

Unit III -

- Solubility Equilibrium
- Acid-Base Chemistry
- Thermodynamics
- Electrochemistry

GENERAL NOTES

- Any student with a disability requiring accommodations in this class should notify the instructors during the first two weeks of the semester. All discussions will remain confidential. Additionally, students should contact the Disabled Student Services Office in the Allen Center.
- The class will be taught using the Student-Centered Active Learning at Rice (SCAL@R) approach, related activities, and laboratory assignments. You will be responsible for keeping up with reading, homework, and laboratory work so that you can participate in discussions of the material during class.
- You are strongly encouraged to work and study in groups. Experience indicates that group study is one of the most critical ingredients in effective learning. Note, however, that you must turn in your own assignments.

ASSIGNMENTS

- **Reading** will be assigned every day. You will be responsible for keeping up with the reading so that you can participate in discussion of the material during class.
- **Class participation** will be expected. This includes in-class Poll Everywhere question participation, which is worth 50 points towards your course grade, and discussion question participation, which will be worth a maximum amount of 50 extra credit points. You are responsible for creating your own Poll Everywhere account and for bringing a compatible web-enabled device to every class to participate. If you do not have a device, please notify the instructors by the end of the first week. Answering a Poll Everywhere question on behalf of a fellow student is considered a violation of the University Honor Code.
- **Online homework** will generally be assigned weekly on Tuesdays at 8:00 AM, and each will be due the following Monday at 11:59 PM. Although you are encouraged to discuss the homework and work together with other students, you must turn in your own work. For example: in a group you can discuss what the question is looking for and reach a consensus about the correct approach, but then you must individually solve and submit your answer online, rather than submit a collective answer. Late homework submissions will not be accepted, but your lowest homework score during the semester will automatically be dropped when calculating your course homework average.

EXAMS

There will be three unit exams during the semester and a cumulative final exam:

First Unit Exam	February 10	7:00 PM – 8:30 PM
Second Unit Exam	March 17	7:00 PM – 8:30 PM
Third Unit Exam	April 14	7:00 PM – 8:30 PM
Final Exam	TBA	

- **All exams are mandatory; no grades will be dropped.** All exams are closed book and closed notes. Exams include material from both the lectures and the laboratories.

- **The Final Exam will be comprehensive** and will be three hours in length. If you demonstrate on the Final Exam that you have improved your mastery of material covered on an earlier unit exam, you can earn redemption points, effectively reclaiming credit lost on the earlier exam (see the Grading section).
- **You may request a regrade** of any part of a midterm exam. Requests must be made in writing to Dr. Tran with an explanation of which part of which problem you think was graded incorrectly and why. Please note that the graders work hard to score each answer accurately. Therefore, historically, the majority of regrade requests have been denied, and most of those accepted are for clerical errors, e.g. misadded points. Examine the key on the web before submitting a regrade request. Also please note that 1 or 2 points are not worth the time for either you or us, as they are very unlikely to affect your course grade in the end. Deadlines for regrade requests will be posted in the Announcements section of the class OWL-Space page. Final exams cannot be regraded, but clerical errors will be corrected.
- **Late Policy**: Students who arrive late to the exam room during the time of an exam may take the exam, but they will have to hand in their papers at the same time as the rest of the class. To avoid this time penalty, be sure to come on time!
- **If you have a conflict** with an exam date due to work, another class, or a university-sponsored activity, you must give us at least one week advance notice. We expect you to email us your schedule so that we can arrange an alternate time for you to take the exam. If you do not give advance notice, we will expect you to be present on the day of the exam. If in case of a sudden illness or personal emergency, you must contact Dr. Kincaid or Dr. Tran as soon as possible to reschedule the exam (this should be done no later than the day of the exam).

GRADING

- **Grading scale:** Your course grade will be determined from the sum of your scores on the exams plus homework, participation, and laboratory scores. Each Unit Exam will be worth 140 points and the Final Exam is worth 230 points. Homework will cumulatively be worth 50 points, in-class Poll Everywhere question participation is worth 50 points, and the laboratory portion of the course is worth 250 points, for a total of 1000 points. Your grade will depend only on your scores and not on the class average. Grading is not comparative or competitive: there is no "curve." Rather, grades will be assigned based upon the following minimum point totals: 900 points for an A-, 780 for a B-, 660 for a C-, 540 for a D-.
- **Redemption points:** On the Final Exam, you will have the opportunity to earn "redemption points" for points lost on the unit exams. For example, if you lose 20 points on the First Unit Exam but answer perfectly on the corresponding section of the Final Exam, you will automatically recover all 20 of those previously lost points. Thus, you will have a second chance to demonstrate your understanding of any material and will be given credit for that improvement. A maximum of 100 redemption points can be earned on the Final Exam. You cannot lose points through the redemption mechanism.
- **Extra Credit:** You may earn up to 50 additional points toward your course total for in-class discussion question participation.
- **Exams and laboratories are required.** Failing to take an exam due to an inexcusable reason, to make arrangements for a missed exam, or to notify the instructors of your absence from an exam within the day of the exam will result in a score of zero points for that exam

and will forfeit your eligibility to earn redemption points for that exam. Each failure to make arrangements with Dr. Kincaid for a missed lab or lab discussion will result in a score of zero points for that particular lab.

- **No Fail Contract:** An optional "no fail" contract is available for this course. If you choose this option, you must agree, under the Honor Code, to abide by specific study practices. Students successfully completing the contract are guaranteed to pass the course. Specific details are in the contract, which you may obtain from the course website under "Resources."

Send comments about this syllabus or the class in general to kincaid@rice.edu or lesa@rice.edu. Last modified January 5, 2015.